

What is claimed is:

1. A stator assembly of a motor comprising:

a plurality of yokes fabricated by laminating a plurality of steel plate sheets

5 having predetermined length;

a plurality of poles coupled between the yokes and fabricated by molding magnetic material using a mold; and

a plurality of bobbin bodies, on which coil for generating induced magnetism is wound, covered on outer portions of the poles.

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2. The assembly of claim 1, wherein the pole comprises:

a guide portion of circular arc shape for gathering magnetic flux;

a neck portion, on which the bobbin body is mounted, connected to a rear surface of the guide portion; and

15 a connecting portion formed on a rear surface of the neck portion and coupled to the yoke.

3. The assembly of claim 1; wherein the pole is molded by using iron powder.

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4. The assembly of claim 2, wherein the guide portion having an inner surface of a circular arc shape which guides a rotor to gather the magnetic flux onto the rotor.

25 5. The assembly of claim 2, wherein the neck portion has shorter

length and lower height than those of the guide portion so as to be inserted into the bobbin body.

6. The assembly of claim 2, wherein the connecting portion is formed to have a circular arc shape having predetermined height and width, and to have connecting grooves on both sides thereof.

7. The assembly of claim 1, wherein the bobbin body comprises:
an inner wing attached on outer portion of the guide portion on the pole;
10 a body connected to the inner wing and mounted on the neck portion of the pole to be wound by the coil; and
an outer wing protruded toward each side of the body to cover the coil.

8. The assembly of claim 7, wherein the inner wing is formed to be a circular arc shape similarly to the guide portion and formed to have a space therein so that the guide portion can be inserted.

9. The assembly of claim 7, wherein the body includes a penetrating hole having same shape as that of the neck portion on inner side thereof so that the neck portion can be inserted therein, and a coil generating induced magnetism wound predetermined times on outer side thereof.

10. The assembly of claim 9, wherein the body includes a winding recess so that the coil can be wound on outer part thereof.

11. The assembly of claim 7, wherein the outer wing is protruded toward each side of the body in a circumferential surface for insulating between the coil and the yoke and is formed to have same height as that of the yoke.

5 12. The assembly of claim 1, wherein the bobbin body is formed by using insulating material for insulating the coil from the pole.

13. The assembly of claim 12, wherein the insulating material is epoxy.

10 14. The assembly of claim 1, wherein the yoke is formed by laminating a plurality of yoke plates coupled between two different connection portions and having a predetermined radius of curvature therein as high as the height of connecting portion.

15 15. The assembly of claim 6 or 14, wherein a connecting projection and a connecting groove for coupling the yoke and the connecting portion are formed between the yoke and the connecting portion as high as the height of the yoke and the connecting portion.

20 16. The assembly of claim 15, wherein the connecting projection is protruded as a square shape to be coupled to the connecting groove of the connecting portion hollowed as a square shape so as not to separate the yoke from the connecting portion.

25 17. The assembly of claim 15, wherein the connecting projection is

formed to be long and has stopping jaws of same shape on both sides thereof to prevent the yoke from being escaped from the connecting portion and to be coupled to stopping grooves of the connecting portion having the shape corresponding to the stopping jaws.

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18. The assembly of claim 1, wherein stepped projections of square shape are formed on both ends of the yoke and coupled to stepped projections of square shape formed on both ends of the connecting portion corresponding thereto.

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19. A fabrication method of a stator assembly of a motor comprising the steps of:

a first step of making a plurality of yoke plates by blanking a steel plate of a predetermined shape;

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a second step of making a yoke by laminating the yoke plates layer by layer;

a third step of filling iron powder material in a predetermined mold;

a fourth step of making a pole by compressing and heating the filled iron powder in predetermined pressure and temperature;

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a fifth step of making a bobbin body which can be inserted into the outer circumferential surface of the pole by injecting an insulating material into a predetermined mold;

a sixth step of inserting the pole into the bobbin body; and

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a seventh step of press-fitting the yoke into left and right ends of the pole to couple the yoke and the pole.

20. The method of claim 19, further comprising a step of winding a coil on an outer circumferential surface of the bobbin body before inserting the bobbin body into the pole between the fifth and sixth steps.

21. The method of claim 19, further comprising a step of winding coil on the outer circumferential surface of the bobbin body after inserting the bobbin body into the pole between the fifth and sixth steps.

22. A fabrication method of a stator assembly of a motor comprising the steps of:

a first step of making a plurality of yoke plates by blanking a steel plate of a predetermined shape;

a second step of making a yoke by laminating the yoke plates layer by layer;

a third step of making a bobbin body by injecting an insulating material into a predetermined mold;

a fourth step of putting the bobbin body in the mold and filling iron powder in the bobbin body;

a fifth step of making a pole in the bobbin body by compressing and heating the filled iron powder in predetermined pressure and temperature; and

a sixth step of coupling the yoke onto each end of the pole on which the bobbin body is covered.

23. The method of claim 22, further comprising a step of winding a coil

on an outer circumferential surface of the bobbin body before forming the pole in the bobbin body between the fourth and fifth steps.

24. The method of claim 22, further comprising a step of winding coil
5 on the outer circumferential surface of the bobbin body after forming the pole in the bobbin body between the fourth and fifth steps.

25. A fabrication method of a stator assembly of a motor comprising the steps of:

10 a first step of making a plurality of yoke plates by blanking a steel plate of predetermined shape;

a second step of making a yoke by laminating the yoke plates layer by layer;

15 a third step of making a bobbin body by injecting an insulating material in a predetermined mold;

a fourth step of arranging the yoke and the bobbin body in a predetermined mold;

a fifth step of filling iron powder in the bobbin body; and

20 a sixth step of molding a pole by compressing and heating the filled iron powder and coupling the pole and the yoke integrally with each other.

26. The method of claim 25, further comprising a step of winding a coil on an outer circumferential surface of the bobbin body before arranging the yoke and the bobbin body on the mold at the fourth step.

27. The method of claim 25, further comprising a step of winding a coil on an outer circumferential surface of the bobbin body after coupling the pole with the yoke in the bobbin body and removing the mold at the fourth step.

5 28. The method of claim 26, wherein the bobbin bodies are coupled to a winder sequentially and the coil is wound on the several bobbin bodies simultaneously as rotating the winder.

29. The method according to any one of claims 19 to 27, wherein the
10 yoke is fabricated by laminating a plurality of yoke plates made by blanking the steel plate having predetermined length and width at one time.

30. The method of claim 25, wherein the pole is fabricated by curing
the iron powder material in a temperature of 300 ~ 500°C to couple the iron
15 powder to each other after pressing the iron powder material.